

What is claimed is:

1. In a communication system comprising a first network including a source arranged to transmit data and a second network including a destination arranged to receive the data, at least one of the first network and the second network being a mesh network, apparatus for reducing interruptions in communication between the source and destination comprising:

a first primary node in the first network;
a first secondary node in the first network;
a second primary node in the second network;
a second secondary node in the second network;
a first set of primary routes within the first network arranged to facilitate delivery of a first set of the data to the first primary node and a second set of the data to the first secondary node;
inter-network routes between the first and second networks arranged to deliver the first and second sets of the data to the second primary node and the second secondary node;

a second set of primary routes within the second network arranged to facilitate delivery of at least one of the first and second sets of data to the destination node;

a selector within the second network arranged to select one of the first and second sets of data;

a first secondary route within the first network between the source and the first secondary node;

a first route selector arranged to select the first secondary route in the event that a primary route within the first set of primary routes is disabled;

a second secondary route within the second network between the second secondary node and the destination; and

a second route selector arranged to select the second secondary route in the event that a primary route within the second set of primary routes is disabled.

2. Apparatus, as claimed in claim 1, wherein the first network comprises a mesh network and the second network comprises a mesh network.

3. Apparatus, as claimed in claim 1, wherein the first network comprises a ring network and the second network comprises a mesh network.

4. Apparatus, as claimed in claim 1, wherein the first set of primary routes comprise a first primary route linking the source with the first primary node and a second primary route linking the first primary node with the first secondary node.

5. Apparatus, as claimed in claim 4, wherein the second set of primary routes comprise a third primary route linking the second primary node with the destination and a fourth primary route linking the second secondary node with the second primary node.

6. Apparatus, as claimed in claim 1, wherein the selector is located in the second primary node.

7. Apparatus, as claimed in claim 1, wherein the second set of the data normally is generated by the first primary node.

8. Apparatus, as claimed in claim 1, wherein the second set of data is absent in the event that any of the primary routes within the first set of primary routes is disabled.

9. Apparatus, as claimed in claim 1, wherein in the event that the primary route linking the source with the first primary node is disabled, the data is routed from the source to the first primary node through the first secondary route and the first secondary node, the second set of the data is generated by the first primary node, and the second set of the data is routed to the first secondary node.

10. Apparatus, as claimed in claim 1, wherein the first set of primary routes comprise a first primary route linking the source with the first primary node and a second primary route linking the source with the first secondary node.

11. Apparatus, as claimed in claim 10, wherein the second set of primary routes comprise a third primary route linking the destination with the second primary node and a fourth primary route linking the destination with the second secondary node.

12. Apparatus, as claimed in claim 11, and further comprising:

a third secondary route within the first network between the source and first primary node; and

a fourth secondary route within the second network between the destination and the second primary node.

13. Apparatus, as claimed in claim 1, wherein the selector is located in the destination.

14. Apparatus, as claimed in claim 1, wherein the second set of the data is generated by the source.

15. In a communication system comprising a first network including a source arranged to transmit data and a second network including a destination arranged to receive the data, at least one of the first network and the second network being a mesh network, the system also comprising a first primary node in the first network, a first secondary node in the first network, a second primary node in the second network, a second secondary node in the second network, a first set of primary routes within the first network, a second set of primary routes within the second network, a first secondary route within the first network between the source and the first secondary node, and a second secondary route within the second network between the second secondary node and the destination, a method of

reducing interruptions in communication between the source and destination comprising:

generating a first set of the data;

generating a second set of the data;

delivering the first set of the data to the first primary node;

delivering the second set of the data to the first secondary node;

delivering the first and second sets of the data to the second primary node and the second secondary node;

delivering at least one of the first and second sets of data to the destination node;

selecting one of the first and second sets of data;

delivering the first set of data to the first secondary node over the first secondary route in the event that a primary route within the first set of primary routes is disabled; and

delivering the at least one of the first and second sets of data to the destination over the second

secondary route in the event that a primary route within the second set of primary routes is disabled.

16. A method, as claimed in claim 15, wherein the first network comprises a mesh network and the second network comprises a mesh network.

17. A method, as claimed in claim 15, wherein the first network comprises a ring network and the second network comprises a mesh network.

18. A method, as claimed in claim 15, wherein the first set of primary routes comprise a first primary route linking the source with the first primary node and a second primary route linking the first primary node with the first secondary node.

19. A method, as claimed in claim 18, wherein the second set of primary routes comprise a third primary route linking the second primary node with the destination and a fourth primary route linking the second secondary node with the second primary node.

20. A method, as claimed in claim 15, wherein said selecting one of the first and second sets of data occurs in the second primary node.

21. A method, as claimed in claim 15, wherein said generating a second set of data occurs at the first primary node.

22. A method, as claimed in claim 15, wherein the second set of data is absent in the event that any of the primary routes within the first set of primary routes is disabled.

23. A method, as claimed in claim 15, wherein in the event that a primary route linking the source with the first primary node is disabled, said delivering the first set of data to the first primary node comprises routing the first set of data from the source to the first primary node through the first secondary route and the first secondary node, wherein said generating a second set of data occurs at the first primary node, and wherein said delivering the second set of data to the first secondary node comprises routing the second set of data from the first primary node to the first secondary node.

24. A method, as claimed in claim 15, wherein the first set of primary routes comprise a first primary route linking the source with the first primary node and

a second primary route linking the source with the first secondary node.

25. A method, as claimed in claim 24, wherein the second set of primary routes comprise a third primary route linking the destination with the second primary node and a fourth primary route linking the destination with the second secondary node.

26. A method, as claimed in claim 25, and further comprising:

a third secondary route within the first network between the source and first primary node; and

a fourth secondary route within the second network between the destination and the second primary node.

27. A method, as claimed in claim 15, wherein said selecting one of the first and second sets of data occurs in the destination.

28. A method, as claimed in claim 15, wherein said generating a first set of data and generating a second set of data occurs at the source.